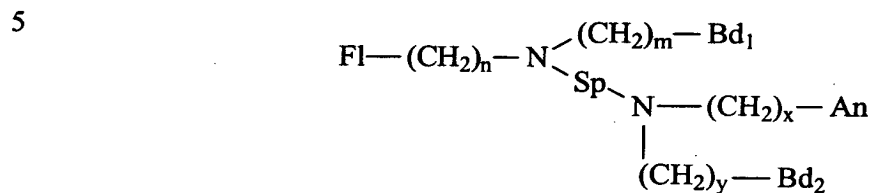


Abstract

Disclosed is a modular fluorescence sensor having the following general formula:



Where Fl is a fluorophore, N is a nitrogen atom, Bd<sub>1</sub> and Bd<sub>2</sub> are independently  
 10 selected binding groups, Sp is an aliphatic spacer, and An is an anchor group for  
 attaching the sensor to solid substrates. n = 1 or 2, m = 1 or 2, x is an integer, and y =  
 1 or 2. The binding groups are capable of binding an analyte molecule to form a stable  
 1:1 complex. In a preferred embodiment, the Bd<sub>1</sub> is R<sub>1</sub>-B(OH)<sub>2</sub> and Bd<sub>2</sub> is R<sub>2</sub>-B(OH)<sub>2</sub>.  
 R<sub>1</sub> and R<sub>2</sub> are aliphatic or aromatic functional groups selected independently from each  
 15 other and B is a boron atom. The present invention also provides methods of  
 synthesizing a modular fluorescence sensor and its use in labeling solid substrates.